

Washington Transportation Plan

Freight Systems

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*Whatcom County Freight Summit
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The Washington Transportation Plan (WTP)

A ten-year blueprint for transportation programs and facilities

Covers the full transportation system: city, county and state

Creates program direction and investment priorities

Organized in nine themes:

- System Preservation
- Safety
- System Efficiencies
- Transportation Access
- Bottlenecks and Chokepoints
- **Moving Freight**
- Health and the Environment
- Contributing to Strong Economy and Good Jobs
- Building Future Visions

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Moving Freight

I. Global Gateways

International and National Trade Flows Through Washington

II. Made in Washington

Regional Economies Rely on the Freight System

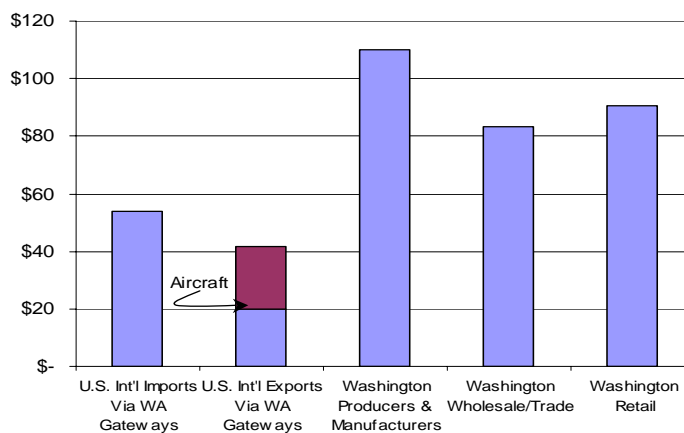
III. Delivering Goods To You

Washington's Retail and Wholesale Distribution System

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Washington State Value of Freight Shipments (2003: Billions of Dollars)



Source: U.S. Customs Bureau; WA State Dept. of Revenue.

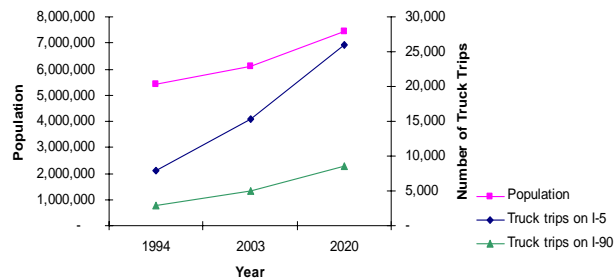
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Freight Volumes in Washington are Growing Twice as Fast as the State's Population

Freight growth in Washington is fueled by globalization, new competitive industry trends and technologies.

Washington State's Population Growth and Growth of Truck Trips on I-5 and I-90



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I. Global Gateways

International and national trade flows through Washington

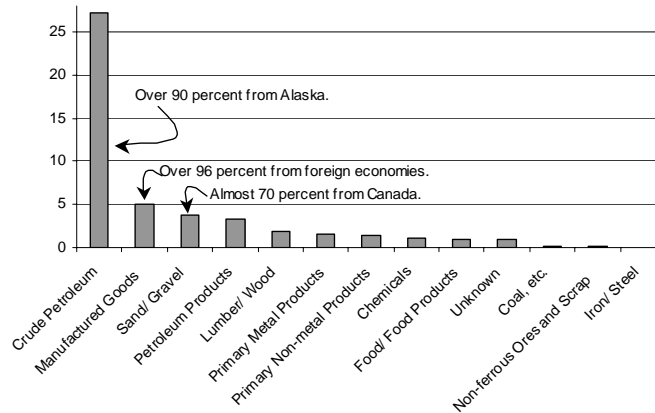


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By Tonnage, Crude Petroleum Dwarfs All Other Waterborne Inbound Commodities

Goods Entering Washington State by Water
2002, Million Tons

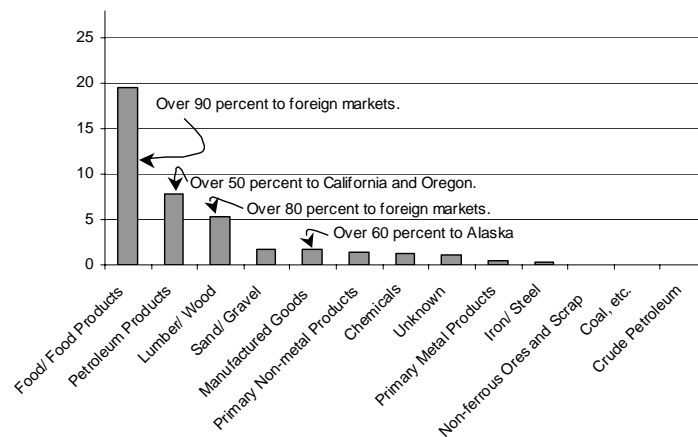


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By Tonnage, Food/ Food Products Outweigh Other Waterborne Outbound Commodities

Goods Leaving Washington State by Water
2002, Million Tons



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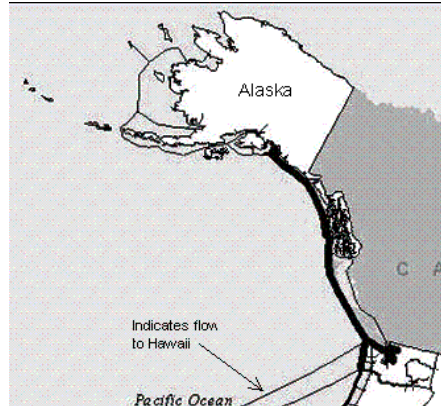
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Washington is the Gateway to Alaska

By value and volume – 24.62 million tons – the most significant commodity shipped to Washington State from Alaska, using the inland waterway and landing at refineries, is crude petroleum.

Washington State ships manufactured goods, food and food products, north to Alaska.

Domestic Freight Flows Moving By Water to and From Washington State

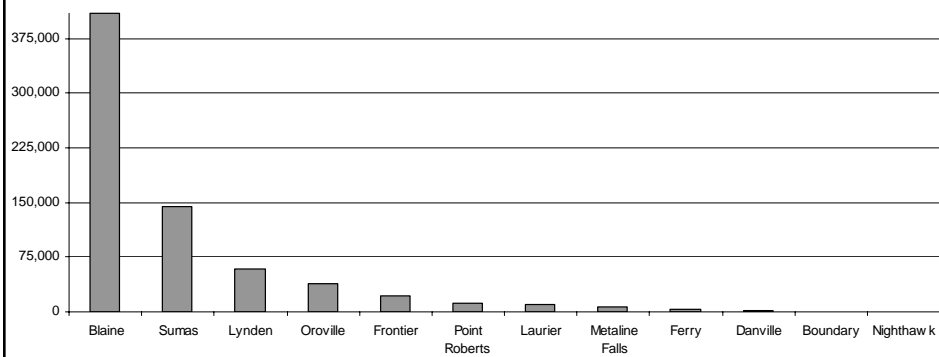


Source: Adapted from Washington: Total Domestic Water Flows, 1998 (US DOT)

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Trucks Entering Washington from Canada 2002 (Number of Trucks)



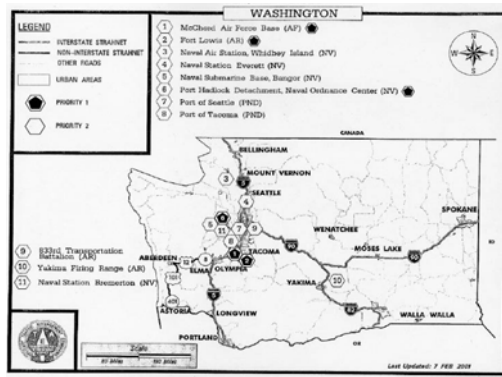
**Source: U.S. Department of Transportation, Bureau of Transportation Statistics, 2003*

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Washington Gateways Play an Essential Role in Supporting National Security

- Fort Lewis is a key U.S. location for gathering, staging and mobilizing forces and material. During a major regional conflict, cargo from all over the United States will rush by road and rail to Fort Lewis.
- Ports of Tacoma and Olympia: PNW strategic ports supporting Fort Lewis units.
- Port of Seattle: sustainment port to ship supplies to troops.
- Port Hadlock Naval Ordnance Center: one of nine national centers.



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II. Made in Washington

Regional Economies Rely on the Freight System

Agriculture: \$5.6 billion in food and agricultural products in 2002.

Freight transportation is especially important for Washington agriculture as the state produces up to twenty times as much food as it consumes, and is far from most of the nation's consumers.

Manufacturing: \$88.3 billion in Gross Business Revenues in 2003, 21.3 percent of the total State Gross Business Income.

Construction: Gross Business Revenues topped \$27 billion in 2003.

Forestry: Value-added wood and paper products produced \$12.7 billion of Washington's Gross Business Revenues in 2003.

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Regional Economies Rely on Freight System



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Northwest Washington: Manufacturing Center and Border Region

Freight System Views:

Seventy-one percent of NW Washington manufacturers are very satisfied with current freight system performance.

What is the Freight Users' Goal?

On-time: 50%

Price: 31%

31,000 Jobs Rely on Freight

	Jobs	Average Wage
Construction	7,985	\$39,556
Manufacturing	14,353	\$39,428
Wholesale/Trade	4,268	\$33,969
Transportation/Utilities	4,551	\$34,004

Big Transportation Issues:

- Solution to I-5 congestion from Olympia to Everett delaying air freight to Sea-Tac, containers to Ports of Seattle and Tacoma, and fast truck service to California markets
- Border delays - Consolidate federal databases regulating freight transport
- All weather local roads

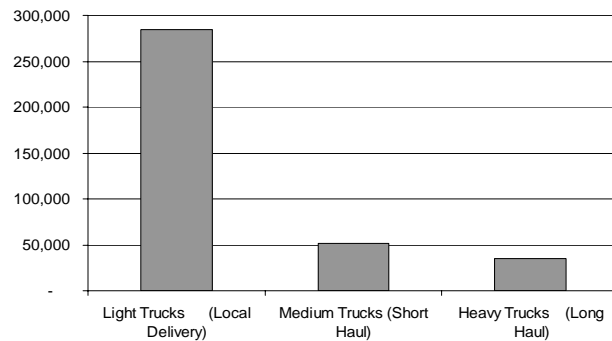
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III. Delivering Goods To You

Washington's retail and wholesale distribution system

- Up to 80% of truck trips operate in the local distribution system
- In 2004, almost ten times more light and medium trucks than heavy trucks were licensed in Washington State.



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Food and Grocery Delivery Supports Every Citizen, Everyday

- **Big Volume of Truck Trips Serve Groceries and Restaurants**

- **A typical large grocery store**

Receives two large semi-tractor trailer deliveries per day, and
Ten to 20 other specialized deliveries per day

- **Specialty markets such as Metropolitan Market on Seattle's Queen Anne Hill**

Receives 375 van and small truck deliveries per week

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- Washington has five refineries; four of them linked by Olympic Pipe Line. Yellowstone and Chevron pipelines serve Eastern Washington from out-of-state refineries.

- Harbor Island
- Tacoma
- Moses Lake
- Renton
- Anacortes
- Pasco
- Tukwila
- Ferndale
- Spokane

- Marine fueling: average fishing boat takes four tanker trucks (30,000 gallons)

- Home heating oil

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Over 4.5 million tons of garbage moved by truck and truck/rail to landfills in Washington State in 2001.

In 2002, 1.4 million tons of Washington's solid waste was exported to Oregon by rail.

State	Number of People Convicted of a Violent Crime
Alabama	16,317
Alaska	21,011
Arizona	4,031
Arkansas	517,699
California	109,919
Colorado	3,663
Connecticut	54,258
Delaware	3,043
District of Columbia	15,270
Florida	156,438
Georgia	56,148
Hawaii	15,270
Idaho	49
Illinois	1,052
Indiana	3,066
Iowa	3,066
Kansas	1,277
Kentucky	153,323
Louisiana	108,659
Maine	108,659
Maryland	108,659
Massachusetts	108,659
Michigan	108,659
Minnesota	108,659
Mississippi	108,659
Missouri	108,659
Montana	108,659
Nebraska	108,659
Nevada	108,659
New Hampshire	108,659
New Jersey	108,659
New Mexico	108,659
New York	108,659
North Carolina	108,659
North Dakota	108,659
Ohio	108,659
Oklahoma	108,659
Oregon	108,659
Pennsylvania	108,659
Rhode Island	108,659
South Carolina	108,659
South Dakota	108,659
Tennessee	108,659
Texas	156,438
Vermont	108,659
Virginia	108,659
Washington	108,659
West Virginia	108,659
Wisconsin	108,659
Wyoming	108,659

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What are the Emerging Washington Transportation Plan Freight Recommendations?

The WTP Freight Report identifies policy and strategy directions and highly productive investments Washington State can make to generate economic prosperity and wealth for citizens of the state.

These improvements are necessary to support Washington's role as a global gateway, our own state's manufacturers and agricultural growers, and the state's retail and wholesale distribution systems.

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Address Freight Constraints in the I-5 Corridor

What is the Problem?

Growth in the I-5 Corridor

Manufacturers, agricultural growers and processors, construction firms, and distributors have no practical alternative to Washington's most heavily used north-south freight routes: I-5, I-405 and Highway 167.

Up to 22,000 trucks drive the I-5 corridor between Central Puget Sound and Oregon, daily. Truck trips increased by 94 percent on the I-5 corridor between 1993 and 2003. Freight volumes are expected to increase another 80 percent - to 35,000 trucks per day - by 2020.

Estimated Average Annual Daily Truck Traffic 1998



Estimated Average Annual Daily Truck Traffic 2020



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Type of Proposal

- ☒ Policy
- ☒ Strategy
- ☒ Capital
- ☒ Operating

Expected Benefits

- ☒ Preservation
- ☒ Safety
- ☐ Transportation Access
- ☒ System Efficiencies
- ☒ Future Visions
- ☒ Bottlenecks & Chokepoints
- ☒ Moving Freight
- ☒ Economy
- ☐ Health & Environment

All or Part Included in '05 - '07 Commission

Funding Recommendation?

☐ All ☒ Part ☐ None

Funded in Current Law Budget

☐ All ☒ Part ☐ None

☒ Global Gateways

☒ Made in WA

☒ Delivering Goods

Address Freight Constraints in the I-5 Corridor For Statewide Market Access

Every region in the state ships goods on the I-5 Corridor to the major markets in Central Puget Sound. Statewide businesses also ship products to the world through Central Puget Sound ports.

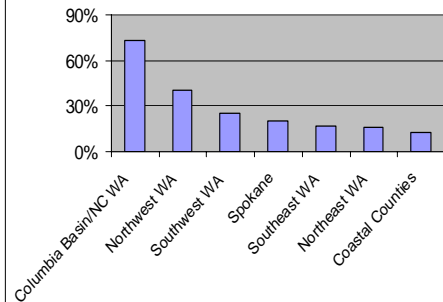
Regional Truck Trips to Central Puget Sound*

Origin By Region	Daily Truck Trips
Northwest Washington	1,500
Columbia Basin/ North Central Washington	1,400
Coastal Counties	750
Southwest Washington	730
Northeast Washington	415
Spokane	390
Southeast Washington	260

*Strategic Freight Transportation Analysis, Washington State University, 2003.

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Percentage of 2003 Regional Truck Trips Destined for Central Puget Sound



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Address Freight Constraints in the I-5 Corridor

What's the Problem?

Higher Business Costs

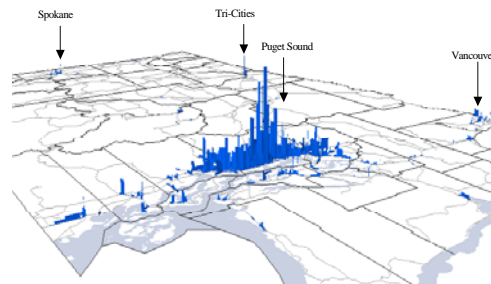
Congestion on the north-south corridor contributes to higher business costs. For example, South Sound manufacturers report paying total logistics costs averaging 16 percent of cost of goods sold, while in Spokane and Whatcom County those costs average 11 percent of cost of goods sold.

A major Less-Than-Truckload carrier is able to pick up two shipments per hour in Central Puget Sound vs. the industry benchmark of three per hour – adding 30 percent to the cost of each shipment.

The primary freight constraint on I-5 is from Central Puget Sound to the south. North of Central Puget Sound to Canada, the number of truck trips on I-5 drops by about two thirds.

Trucking companies may try to schedule around congestion patterns, but must meet customer demands for on-time service in preferred time windows.

Total Daily Vehicle Hours of Delay Per Lane Mile



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Address Freight Constraints in the I-5 Corridor

Description of Proposals

Projects

Analyze the benefits of a public-private truck-toll highway from Central Puget Sound to the Oregon border. This highway could be an extension of I-5, or follow the I-405/Highway 167/I-5 route.

Corridor completion of the major north-south freight corridor system:

- Highway 167 to I-5
- Highway 167 and Highway 18
- Highway 509 to I-5
- Complete Highway 18 to I-90
- Add a third eastbound lane on Highway 518 from Sea-Tac International Airport to I-5

Failing structures:

- Replace the Alaskan Way Viaduct
- Replace the I-5 Columbia River Bridge

Policy

Recognize the South Puget Sound warehouse district as a component of the state's Global Gateway system along with rail and port facilities, and preserve the warehouse district's proximity to the Ports of Seattle and Tacoma.

Operations

Continuously Improve Traffic Management System & Incident Response Program

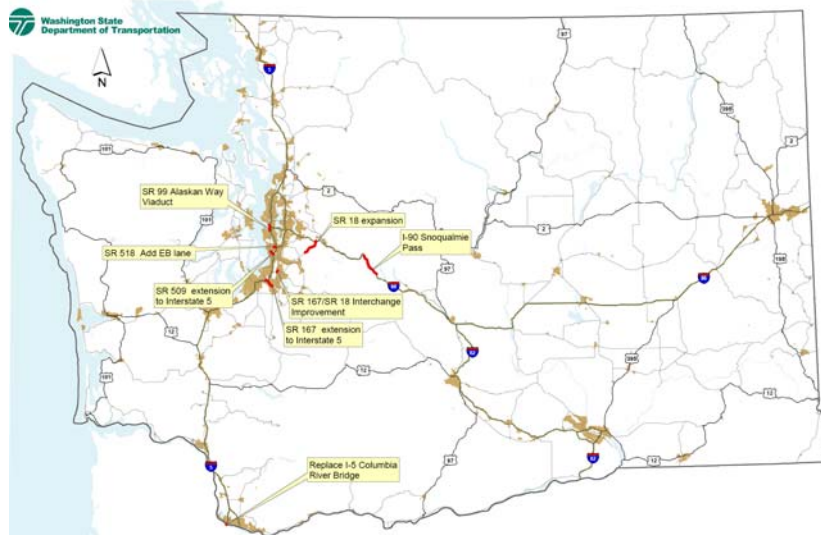
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Address Freight Constraints in the I-5 Corridor

Corridor Completion and Failing Structures in Washington's Primary Freight Corridors



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Develop Statewide Core All-Weather County Road System

What is the Problem?

Up to two months per year, Washington State agricultural growers and processors, manufacturers and timber/lumber businesses can't ship their products to market due to weight restrictions on county roads.

In a global marketplace, Washington producers inability to meet buyers' requirements causes loss of customers, and ultimately, loss of the state's competitive advantage.

Description of Proposal

Identify, establish and fund a statewide core all-weather county road system to minimize the economic impacts of freeze and thaw-related road closures.

Type of Proposal

- ☐ Policy
☒ Strategy
☒ Capital
☐ Operating

Expected Benefits

- ☒ Preservation
☐ Safety
☐ Transportation Access
☒ System Efficiencies
☐ Future Visions
☐ Bottlenecks & Chokepoints
☒ Moving Freight
☒ Economy
☐ Health & Environment

All or Part Included in
 '05 - '07 Commission
 Funding Recommendation?
☐ All ☐ Part ☒ None

Funded in Current Law Budget
☐ All ☐ Part ☒ None

- ☐ Global Gateways
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☐ Delivering Goods

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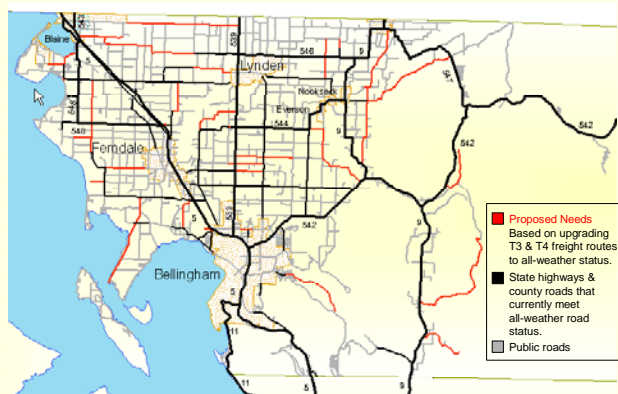
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Moving Freight

Develop a Statewide Core All-Weather County Road System

Description of Benefits/Impacts of Implementing the Proposal

Whatcom County Core All-Weather County Road System



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Create Fuel Pipeline Capacity and Distribution Alternatives

Description of Proposal

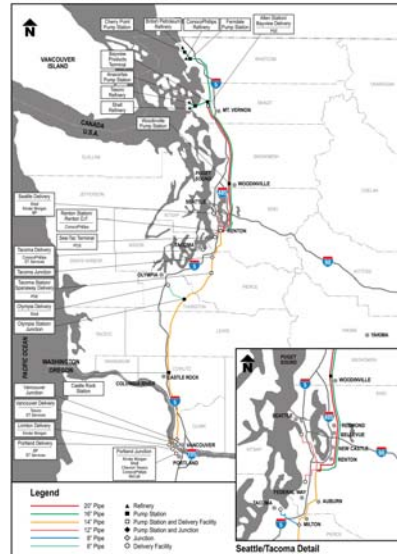
Policy: Create fuel pipeline capacity and distribution alternatives to meet Washington's long-term demand.

Strategy: Analyze constraints and remove obstructions so that the market may respond to increasing demand.

Description of Benefits/Impacts of Implementing the Proposal

Efficiently supplying fuel to Washington citizens and businesses supports the economic vitality of our state.

Petroleum Pipelines



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Ongoing Funding for Regional Economic Development & Freight System Mitigation

Description of Proposal

Create an ongoing, appropriate level of funding for regional economic development freight projects, port and intermodal access improvements, grade separations, shortline rail improvements, and truck route program to optimize truck movements in metro areas.

Description of Benefits/Impacts of Implementing the Proposal

Benefits of investing in regional economic development include increased:

- Contribution to local and state tax base
- Contribution to Gross State Product
- Growth of jobs
- Economic growth distributed throughout the state

Statewide truck route program to provide incentives for congested urban areas to optimize truck movements. Eighty percent of all freight moves on the local system.

Benefits from investing in the growth in Washington's Global Gateways freight system include:

- Economic impact of jobs created by seaport, rail and warehouse district activities.
- Reduced cost of international transport for Washington State goods.
- Advantage from the region's soft trade infrastructure: human capital that facilitates financial, legal, and other international business issues.

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Complete the Statewide CVISN/ Weigh-in-Motion System

What is the Problem?

Truck scales are used to protect state highways from overweight vehicles, and provide safety inspections and freight data, while minimizing delay to trucks.

Safe and legal carriers need to move products with the least amount of interruption.

In Washington, trucks without transponders spend an average of 6.13 minutes at scales for weight verification (inspections can take much longer).

Much of the state's weigh station infrastructure is aging. Fourteen of 15 weigh stations were built over 20 years ago, and none can handle the current volume of truck traffic. There are currently only eight CVISN/ Weigh-In-Motion stations operating in Washington.

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Type of Proposal

- ☐ Policy
☐ Strategy
☒ Capital
☒ Operating

Expected Benefits

- ☐ Preservation
☒ Safety
☐ Transportation Access
☒ System Efficiencies
☒ Future Visions
☐ Bottlenecks & Chokepoints
☐ Moving Freight
☒ Economy
☐ Health & Environment

All or Part Included in '05 - '07 Commission Funding Recommendation?
☐ All ☒ Part ☐ None

Funded in Current Law Budget
☐ All ☒ Part ☐ None

- ☒ Global Gateways
☒ Made in WA
☒ Delivering Goods

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Address Freight Constraints on Mainline Rail

What is the Problem?

Container freight entering the Ports of Seattle and Tacoma will triple by 2025. Most of these goods are shipped to the Midwest via rail, but there isn't enough east-west rail capacity to handle a tripling of current volume.

**Comparison of Mainline Rail Capacity With Current and Projected Operations
(Trains per Day)**

Mainline Segment	Current Operations			Projected 2025 Operations		
	Estimated Sustainable Cap.	Ave. Trains/Day	Peak Trains/Day	Estimated Sustainable Cap.	Ave. Trains/Day	Peak Trains/Day
Stevens Pass	28	23	25	28	46	51
Stampede Pass	20	6	7	20	16	18
Blaine to Everett	18	14	15	30	21	23
Everett to Seattle	50	45	50	100	84	92
Seattle to Tacoma	100	85	94	200	189	208
Tacoma to Kalama	60	45	50	120	80	88
Kalama to Longview	80	52	57	160	94	103

BST Associates. 2004 Marine Cargo Forecast. Original source: MainLine Management and HDR, Inc. (Page 115). Includes passenger trains.

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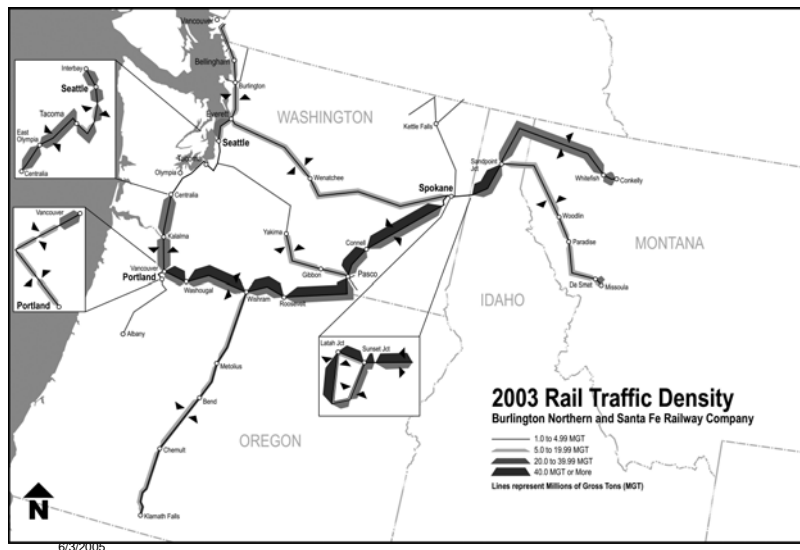
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Address Freight Constraints on Mainline Rail



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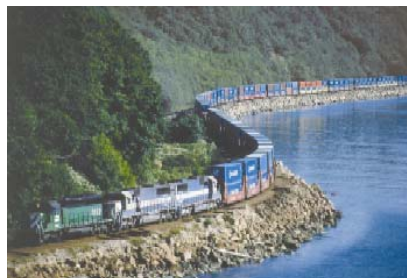
Address Freight Constraints on Mainline Rail

Description of Proposals

I. Policy: Support growth in east-west mainline rail capacity and port-rail connections, and preserve rail yards in metro areas.

Strategy: Support the BNSF Railway Company's (in track miles and volume the state's largest railroad) preliminary plan to:

- Add siding capacity along the Columbia River Gorge
- Enlarge Stampede Pass to accommodate double-stacked trains
- Complete the Swift siding improvement at the Canadian border
- Complete the Vancouver rail project



II. Policy: Review the relationship between freight and passenger rail service on the Interstate-5 rail corridor, and ensure that growth of passenger rail does not encumber freight service.

Strategy: Study the impact of projected growth in freight and passenger rail services on capacity in the I-5 rail corridor.

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Maintain the Columbia- Snake River Trade Corridor

Description of Proposal

Implement a 20-year Dredge Management Plan to stabilize the Columbia-Snake River barge system.

Columbia River Channel deepening so downriver ports can handle larger ship sizes and maintain existing trade.

Mid-Columbia & Snake River Lock Repair & Retrofit: eight dams in need of near-term repair.

Columbia River Jetty Repair to keep sand from being deposited directly into the navigation channel during storms.



Type of Proposal	
<input checked="" type="checkbox"/>	Policy
<input checked="" type="checkbox"/>	Strategy
<input type="checkbox"/>	Capital
<input type="checkbox"/>	Operating
Expected Benefits	
<input checked="" type="checkbox"/>	Preservation
<input type="checkbox"/>	Safety
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<input type="checkbox"/>	All
<input type="checkbox"/>	Part
<input checked="" type="checkbox"/>	None
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Moving Freight

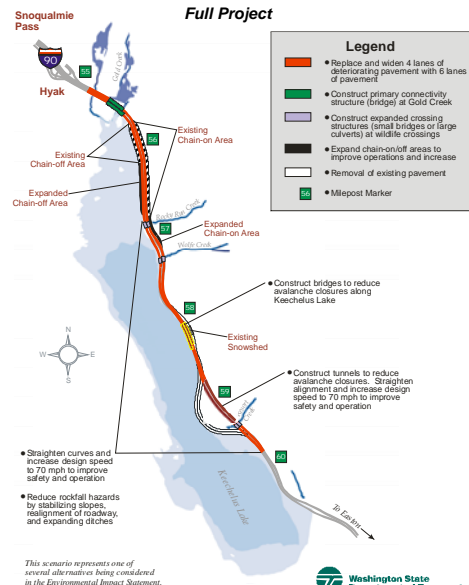
Description of Proposal

Improve Interstate 90, east of and over Snoqualmie Pass, to prevent severe weather closures.



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I-90 Snoqualmie Pass East Hyak to Keechelus Dam Full Project



This scenario represents one of several alternatives being considered in the Environmental Impact Statement.

Washington State Department of Transportation

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Air Cargo System Statewide Study

What is the Problem?

Air transportation plays a significant role in the movement of international and domestic air cargo, but there isn't enough information on the origins and destinations of air cargo, value, and commodities shipped. There is also a need to understand air cargo constraints in the market place in order to identify strategies to move cargo more efficiently and effectively across state, international, and jurisdictional boundaries.



Description of Proposal

A statewide air cargo study is needed to identify air cargo trends, origin and destination of cargo, and strategies to facilitate efficient movement of air cargo. Ongoing regional planning efforts may help guide the development of a statewide air cargo study, such as information from the upcoming Puget Sound Regional Council air cargo freight access study.

Description of Benefits/Impacts of Implementing the Proposal

Identification of strategies and performance measures to increase the overall effectiveness of air cargo and movement of freight in Washington State.

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Type of Proposal

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Ideas for Additional Study?

Freight related issues such as security, safety and the environment are being considered in other parts of the update of the Washington Transportation Plan.

What did we miss?

We want the conversation about freight strategy to involve all the players

For a full copy of the freight report please go to:
http://www.wsdot.wa.gov/freight/images/WTP_FreightUpdate.pdf

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